



ABSTRACT OF THE DISCLOSURE

An optical repeater includes: a first forward pumping coupler and a first backward pumping coupler inserted in an uplink optical fiber consecutively along the transfer direction of the optical signals therein; a second backward pumping coupler and a second forward pumping coupler inserted in a downlink optical fiber consecutively along the transfer direction of the optical signals therein; a first light source for supplying a pump light having a controlled power level to the first backward pumping coupler and the second forward pumping coupler; a second light source for supplying a pump light having a controlled power level to the first forward pumping coupler and the second backward pumping coupler. Each of the pumping couplers is a Raman amplifier.